

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

INVENSAS CORPORATION,

Plaintiff,

vs.

**SAMSUNG ELECTRONICS CO., LTD.
and SAMSUNG ELECTRONICS
AMERICA, INC.,**

Defendants.

Civil Action No. 2:17-cv-670 [RWS/RSP]

JURY TRIAL DEMANDED

**DEFENDANTS' OBJECTIONS PURSUANT TO RULE 72(A) OF THE MAGISTRATE
JUDGE'S CLAIM CONSTRUCTION OPINION AND ORDER (D.I. 193)**

The Samsung Defendants respectfully object to the Magistrate Judge’s Claim Construction And Order (D.I. 193, “*Markman* Order”) for certain terms in U.S. Patent Nos. 6,232,231 (’231 Patent), 6,849,946 (’946 Patent), and 6,054,336 (’336 Patent).

I. U.S. PATENT NOS. 6,232,231 (CLAIMS 1-8) AND 6,849,946 (CLAIMS 16-22)

A. “substantially planar / co-planar” (’946, Cl. 16-17; ’231, Cl. 1, 4)

Plaintiff	Defendants	Court
Plain and ordinary meaning, no construction necessary. Alternatively: Substantially planar: “substantially flat or level”; Substantially co-planar: “substantially at the same elevation”	Indefinite	Plain and ordinary meaning

Under *Nautilus, Inc. v. Biosig Instruments, Inc.*, a “patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” 134 S. Ct. 2120, 2124 (2014). Applying *Nautilus*, the Federal Circuit has held that terms of degree are indefinite when the intrinsic record fails to establish “some objective standard for measuring the degree.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014). Courts have accordingly found terms of degree that use the phrase “substantially” indefinite where the intrinsic evidence disclosed no objective bounds of “substantially.” *E.g., Geodynamics, Inc. v. Dynaenergetics US, Inc.*, No. 2:15-CV-1546-RSP, 2016 WL 6217181, at *15-16 (E.D. Tex. Oct. 25, 2016) (finding “***substantially equal*** to the total depth of penetration” indefinite because the intrinsic evidence provided no guidance as to “when the clear tunnel depth is no longer ‘substantially equal’ to the total depth of the tunnel.”).

Under *Nautilus* and its progeny, the terms “substantially planar/co-planar” are indefinite because they purport to define the degree of planarity or flatness of a surface within a semiconductor chip, yet the intrinsic record discloses no objective boundary between a surface that is “substantially planar/co-planar” and one that is not. The *Markman* Order cites no guiding

disclosure in the intrinsic evidence. Instead, the order observes that “perfect planarization . . . might be unattainable at an atomic level” and “‘substantially planar’ and ‘substantially coplanar’ . . . relate to avoiding the formation of elevational disparities during the manufacturing process.” D.I. 193 at 7. But “a patent does not satisfy the definiteness requirement of § 112 merely because ‘a court can ascribe *some* meaning to a patent’s claims.’” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (emphasis original; citing *Nautilus*). Moreover, the order’s observations only highlight the fundamental ambiguity with “substantially planar/co-planar. Although “perfect planarization” is not required, the intrinsic evidence never discloses what degree of planarization *is* required or, conversely, what degree of elevational disparities is permissible.

In briefing and at the hearing, Invensas relied on text at column 1, lines 28 to 48 of the specification as disclosing the objective criteria of a surface that is “sufficiently flat . . . to build the subsequent layers of a semiconductor chip.” D.I. 123, 10. But the cited text never uses the terms “substantially planar/co-planar” or otherwise describes the patents’ goals. ’231, 1:28-48. In any event, Invensas criteria of “sufficiently flat” is subjective and context-dependent. As its expert Dr. Kanicki stated: “the degree of planarity required will vary depending on the tolerances of the particular fabrication process step used during the manufacture of a given chip—including process node, desired feature size, and the depth-of-focus.” D.I. 123-2, ¶57. Similarly, inventor Mr. Sethuraman testified that “[e]very customer has their own way of describing what is needed” for planarity and “[w]ithout knowing the context, I cannot tell you” if a surface is “substantially coplanar.” D.I. 134, Ex. B at 43:23-44:2, 123:2-11. On similar facts in *Icon Health & Fitness, Inc. v. Polar Electro Oy*, the Federal Circuit found terms indefinite when their meanings varied “from person-to-person” and could “have meaning only in the context of a defined reference” that the intrinsic evidence did not identify. 656 F. App’x 1008, 1013-15 (Fed. Cir. 2016).

Because “substantially planar/co-planar” are terms of degree that depend on subjective

preferences and contexts that are not resolved by the intrinsic evidence, they are indefinite.

II. U.S. PATENT NO. 6,054,336 (CLAIMS 1-2)

A. “forming a conductor pattern on the conductive layer” (Cl. 1)

Plaintiff	Defendants	Court
“forming a pattern to be transferred to the conductive layer”	“forming a pattern in the conductive layer with gaps corresponding to the auxiliary windows”	“forming a pattern to be transferred to the conductive layer”

The parties’ first dispute is whether the “conductor pattern” is (1) on top of and “to be transferred” to the “conductive layer (as Invensas proposes) or (2) “in the conductive layer” (as Samsung proposes). In adopting Invensas’s position, the *Markman* Order disregards the specification’s consistent use of “conductor pattern” to refer to a pattern formed *in* the conductive layer, not on top of it. *E.g.*, ’336, 2:2-11 (“[a]ccording to the invention . . . the **conductor pattern is formed in the conductive layer.**”), 1:5-9 (“a **conductive layer** is provided on an electrically insulating substrate, **from which layer a conductor pattern is formed.**”). The order instead reasons that Claim 1 covers steps depicted in Figures 1(a)-(g) of the specification where a pattern is formed on top of the conductive layer, while dependent Claim 5 covers a later step depicted in Figure 1(h) where that pattern is transferred into the conductive layer. D.I. 173 at 14. The order misconstrues the relationship between Claims 1 and 5 and the specification’s figures. The specification discloses two alternative embodiments for forming a “conductor pattern” *in* the “conductive layer” — either through oxidation of exposed portions as in Figure 1(g)-(h) or through etching the conductive layer as in Figures 2(a)-(b). ’336, 4:11-42 (describing oxidation method), 4:43-64 (describing etching method). Claim 1 is not limited to either embodiment and therefore covers *both* possible embodiments for forming a “conductor pattern” *in* the conductive layer. By contrast, Claim 5 is limited to the embodiment of Figures 1(g)-(h) where “exposed portions of the conductive layer . . . are oxidized throughout their entire thickness.” Thus, Claim 5 does not cover a later step, that

follows Claim 1, of transferring a pattern to the “conductive layer” — rather it limits the method to one embodiment for forming the “conductor pattern” *in* the “conductive layer.”

The *Markman* Order provides no guidance regarding the second dispute of whether the recited “pattern” must consist of “gaps corresponding to the auxiliary windows.” The order’s omission of this requirement leaves the form of the recited “pattern” unbounded, which is inconsistent with the ’336 Patent’s purpose and disclosure. The patent’s purpose is to form gaps in a conductor pattern that are smaller than the gaps that could be formed using lithography. ’336, Abstract, 1:64-67, 3:3-18. It discloses achieving this goal using only one method: by first forming gaps or “auxiliary windows” using lithography, and then narrowing these “auxiliary windows” using spacers and etching to ultimately form narrower gaps in the “conductive layer.” *Id.*, Figs. 1a-g, 3:45-4:19. If any gaps were formed outside of and without using “auxiliary windows” — as the *Markman* Order allows — then there is no method disclosed in the patent for making those gaps smaller than what could be achieved using lithography, thus defeating the patent’s purpose. *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1324 (Fed. Cir. 2008) (holding that claims must be construed in a manner that “achieve[s] the overall object of the invention”).

B. “continuing etching anisotropically through the auxiliary window and the spacers to define the windows at the conductive layer” (Cl. 1)

Plaintiff	Defendants	Court
Plain and ordinary meaning, no construction necessary.	“without interruption, to go on etching anisotropically the first dielectric layer to define windows at the conductive layer only within the auxiliary window”	Plain and ordinary meaning

For the parties’ first dispute regarding the location of the “windows at the conductive layer,” Samsung proposes that these windows are defined “only with in the auxiliary window[s]” because this requirement is consistent with the ’336 Patent’s disclosed method for ensuring that the “windows at the conductive layer” are smaller than the “auxiliary windows.” The *Markman* Order rejects Samsung’s proposal on grounds that Claim 1 “already limits the size of the auxiliary

windows relative to the windows” at the conductive layer and “[t]here is no basis for further limiting the scope of the disputed phrase.” D.I. 193 at 15-16. But Claim 1 merely limits a **result** — that the “windows at the conductive layer” must be smaller than the “auxiliary windows.” Claim 1’s plain language, however, does not limit **how** it achieves that result to the ’336 Patent’s only disclosed method — that the “windows at the conductive layer” can be defined only within “auxiliary windows.” ’336, Figs. 1d-f, 3:59-4:11. By adopting plain meaning, the order broadens Claim 1’s scope to exceed the specification’s only disclosed method and thereby permits Invensas to assert infringement against other, undisclosed methods of forming narrower windows that do not require forming them within the “auxiliary windows.” *See Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003) (“where the specification makes clear . . . that the claimed invention is narrower than the claim language might imply, it is entirely permissible and proper to limit the claims”).

For the parties’ second dispute, the order does not address Samsung’s revised position presented at the *Markman* hearing that the “continuing etching” language in Claim 1 does not permit any intervening steps between “etching” and “continuing etching.” 8/22/18 *Markman* Tr at 97:17-102:21. To hold otherwise is contrary to the plain meaning of “continuing.” It is also contrary to the specification’s disclosure that “continuing etching” follows directly after the prior “etching” step, with both steps etching oxide layers. ’336, 3:62-4:11. The specification never suggests any intervening steps such as adding other layers or etching different, non-oxide layers.

III. CONCLUSION

For the reasons stated above and in Samsung’s prior *Markman* briefing and oral arguments, Samsung objects to the constructions discussed above for the ’231, ’946, and ’336 Patents.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on November 9, 2018.

/s/ Ryan Yagura